

PHY 131 sec. EG

Homework 10

W. Trimble

Due: Wednesday 2017-11-08

After the midterm, we will be briefly looking at Urone Chapters 6, 8, 10, 11, 17, and 18; Sound, electricity, pressure, atomic physics, and nuclear physics.

These questions are from sections 6.1-6.4.

1. A 1.35 L bicycle tire is inflated to 60 PSI. How many liters of air at standard pressure are in the tire ?
2. A woman's blood pressure is 120 / 95 mmHg. What are these pressures in bar?
3. How high a column of water will 300 mmHg of pressure support?
4. Urone 6.4 Force on the lid of a pressure cooker
5. Urone 6.8 Estimate the thickness of the atmosphere
6. Urone 6.6 Hydraulic cylinder force
7. Urone 6.13 Pressure of heartbeats
8. A 49 foot high cube cargo container measures 40.0 feet by 8.0 feet by 9.5 feet.
 - (a) What is the volume of the container in m^3
 - (b) The container weighs 3790 kg and can carry 29000 kg. What is the density of a fully-laden cargo container and if it were watertight, would it sink?